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June 16, 1992

Donald F. Schnell
Senior Vice President
Nuclear



U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
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Gentlemen:

ULNRC-2648

DOCKET NUMBER 50-483
CALLAWAY PLANT

EXEMPTION FROM 10CFR50, APPENDIX J, SECTION III.D.1(a)

- References: 1) ULNRC-2650, dated June 16, 1992
2) NRC letter from M. D. Lynch to
D. F. Schnell, dated October 22, 1991

Union Electric Company herewith transmits an exemption request, pursuant to the provisions of 10CFR50.12, from the testing requirements of 10CFR50, Appendix J, Section III.D.1(a).

This request is a one-time exemption that would allow the third test of the first 10-year service period to be performed approximately 14 months beyond the 10-year service period.

The attachment contains the Exemption Request with evaluation and 10CFR50.12 Special Circumstances in support of this request. The Callaway Onsite Review Committee and the Nuclear Safety Review Board have approved the exemption request.

We are requesting that the NRC Staff please expedite their review of this submittal so that the requested exemption will be issued by October 1992 to facilitate our planning for future CILRTs.

Very truly yours,

A handwritten signature in cursive script that reads "Donald F. Schnell".

Donald F. Schnell

JMC/kea
Attachment

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PDR ADOCK 05000483
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STATE OF MISSOURI)
) S S
CITY OF ST. LOUIS)

Donald F. Schnell, of lawful age, being first duly sworn upon oath says that he is Senior Vice President-Nuclear and an officer of Union Electric Company; that he has read the foregoing document and knows the content thereof; that he has executed the same for and on behalf of said company with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By Donald F. Schnell
Donald F. Schnell
Senior Vice President
Nuclear

SUBSCRIBED and sworn to before me this 16th day
of June, 1992.

Barbara J. Pfaff
BARBARA J. PFAFF
NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 22, 1993
ST. LOUIS COUNTY

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EXEMPTION REQUEST

Proposed Exemption

This proposed exemption request is to 10CFR50, Appendix J, Section III.D.1(a) which requires a set of three Type A tests (Containment Integrated Leakage Rate Test or CILRT) be performed, at approximately equal intervals during each 10-year service period. This request is a one-time exemption that would allow the third test of the first 10-year service period to be performed approximately 14 months beyond the 10-year service period. This exemption is needed in conjunction with our amendment request (Reference 1) to Technical Specification (T/S) 4.6.1.2.a that would allow the third test to be performed at approximately a 53-month interval in lieu of the current maximum interval of 50 months. This 53-month interval coupled with the first and second test intervals of 40 and 41 months respectively would exceed the 10-year time frame for the first service period.

Background

Type A tests are defined in Section II.F of 10 CFR 50, Appendix J as those tests intended to measure the primary reactor containment overall integrated leakage rate at periodic intervals. The time required to perform the CILRTs necessitates that they be performed during refueling outages. The time interval between CILRTs should be about 40 months based on performing three such tests at approximately equal intervals during each 10-year service period. Since refueling outages do not necessarily occur coincident with a 40-month interval, a permissible variation of 10 months (i.e., a 25 percent variation) is authorized in the T/S to permit flexibility in scheduling the CILRTs.

The first and second CILRTs, of the set of three tests for the first 10-year service period for Callaway Plant, were conducted in April 1987 and October 1990, respectively. This represents testing intervals of 40 and 41 months from the initial preoperational CILRT performed in January 1984. This would indicate that the third of the first set of three CILRTs be performed at Refuel 6 scheduled for September 1993 which will be 35 months after the preceding test and within the first 10-year service period. The result of this testing sequence would cause an extra CILRT to be performed over the course of the next 10-year service period based on the 40 ± 10 month testing interval coincident with the 18-month fuel cycle utilized at Callaway Plant. In order to prevent performing this fourth CILRT in the second 10-year service period, we are proposing that the third CILRT for the first 10-year service period be performed during Refuel 7 scheduled for March 1995. Therefore, the one time scheduler exemption is needed to allow this test interval to exceed the 40 ± 10 month requirement and the three tests within the first 10-year service period requirement.

Data from past tests at Callaway Plant and from NUMARC indicates that the majority of the leakage that is measured during the CILRT is from the containment penetrations and not from the containment barrier itself. Since the Type B and C tests (Local Leakage Rate Test or LLRT) program, which measures penetration and valve leakage, is not altered, assurance that containment integrity is maintained can also be verified by the performance of the LLRTs. In addition to the LLRTs indication of containment integrity the data from the first and second CILRT illustrates that the "as-left" leakage rate was well below the limit established for acceptance in 10 CFR 50, Appendix J and Technical Specifications. The allowable leakage rate, L_a is 0.2 wt.%/day, however Appendix J and T/S requires that the leakage rate be less than 75% of this value to allow for deterioration in leakage paths between tests. Therefore, the acceptance limit is 0.15 wt.%/day and the "as-left" leakage rates for the first two CILRTs were 0.083 and 0.0505 wt.%/day which is well below the acceptance limit.

It is our belief that the Appendix J requirement to perform a set of three CILRTs in a 10-year service period with the third one performed when the plant is shutdown for the 10-year plant inservice inspections, is based on the requirements of 10CFR50.55a(g)(4). This section of the regulations requires that inservice examinations of components and system pressure tests be conducted in 10-year intervals. At Callaway Plant the inservice volumetric, surface and visual examinations of components and system pressure tests are performed during refueling outages on an ongoing basis. There is no plant shutdown for these 10-year plant inservice inspections. Therefore, the requirements of 10CFR50.55a(g)(4) and Section III.D.1.(a) for performing the third CILRT during plant shutdown at the end of a 10-year service period are unrelated as has been previously determined by the NRC for Callaway Plant (Reference 2).

Evaluation

The purpose of the CILRT, to provide periodic verification by tests of the leak-tight integrity of the primary reactor containment, and systems and components which penetrate containment, will not be adversely impacted by this one-time exemption. The Local Leak Rate Test or LLRT program is not affected and past data has indicated the majority of the leakage measured during the CILRT is from containment penetrations and valves and not from the containment barrier itself. Therefore, assurance that containment integrity is maintained can also be verified by the performance of the LLRTs.

Given the above discussions, and the fact that a revision to Appendix J is pending that would delete the 10-year interval for performing three CILRTs and replace it with a requirement that any three consecutive test intervals be ≤ 3.25 times 48 months, this exemption will not pose any undue risk to the health and safety of the public or involve a significant safety hazard. Special circumstances, as provided in 10CFR50.12(a)(2)(ii), are

present justifying the exemption from Appendix J. Namely, application of the regulation in the particular circumstances is not necessary to achieve its underlying purpose, which is to ensure that accurate and conservative methods are used in performing periodic containment leak rate tests at approximately equal intervals throughout the life of the plant to assure that containment integrity is being maintained.